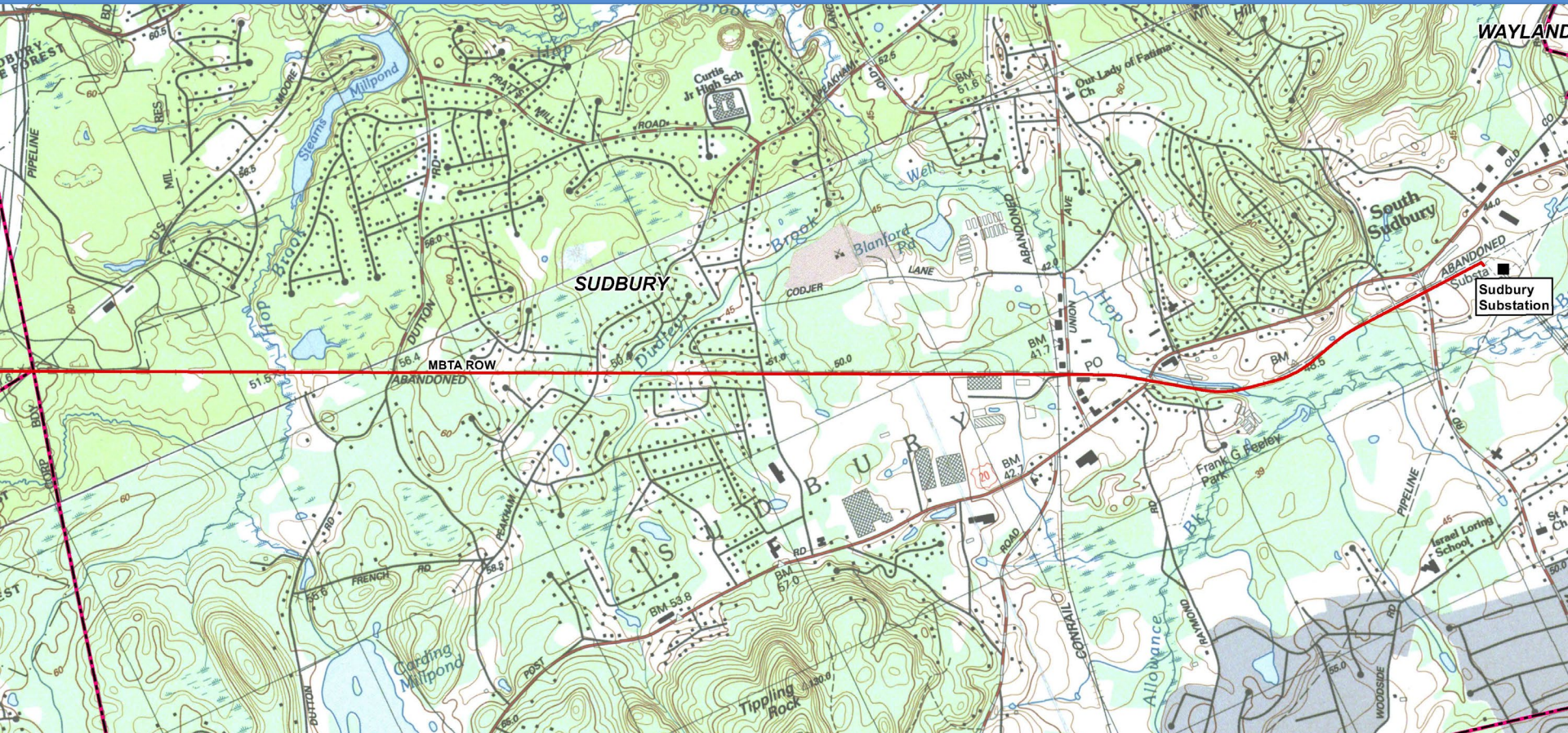


Sudbury-Hudson Transmission Reliability and Mass. Central Rail Trail Project

Sudbury Planning Board Hearing
August 12, 2020





- Joint filing - Eversource and the Massachusetts Department of Conservation and Recreation to construct the Sudbury to Hudson Transmission Reliability and Mass Central Rail Trail (“MCRT”) Project
- Two compatible uses in a single existing former rail corridor
- Entire Project in Sudbury, Marlborough, Stow, and Hudson = ~ 9 miles
- Phased construction sequence

Project Locus Map



- Project in Sudbury = approximately 4.3 miles long
- Crosses Hop Brook twice and Dudley Brook once



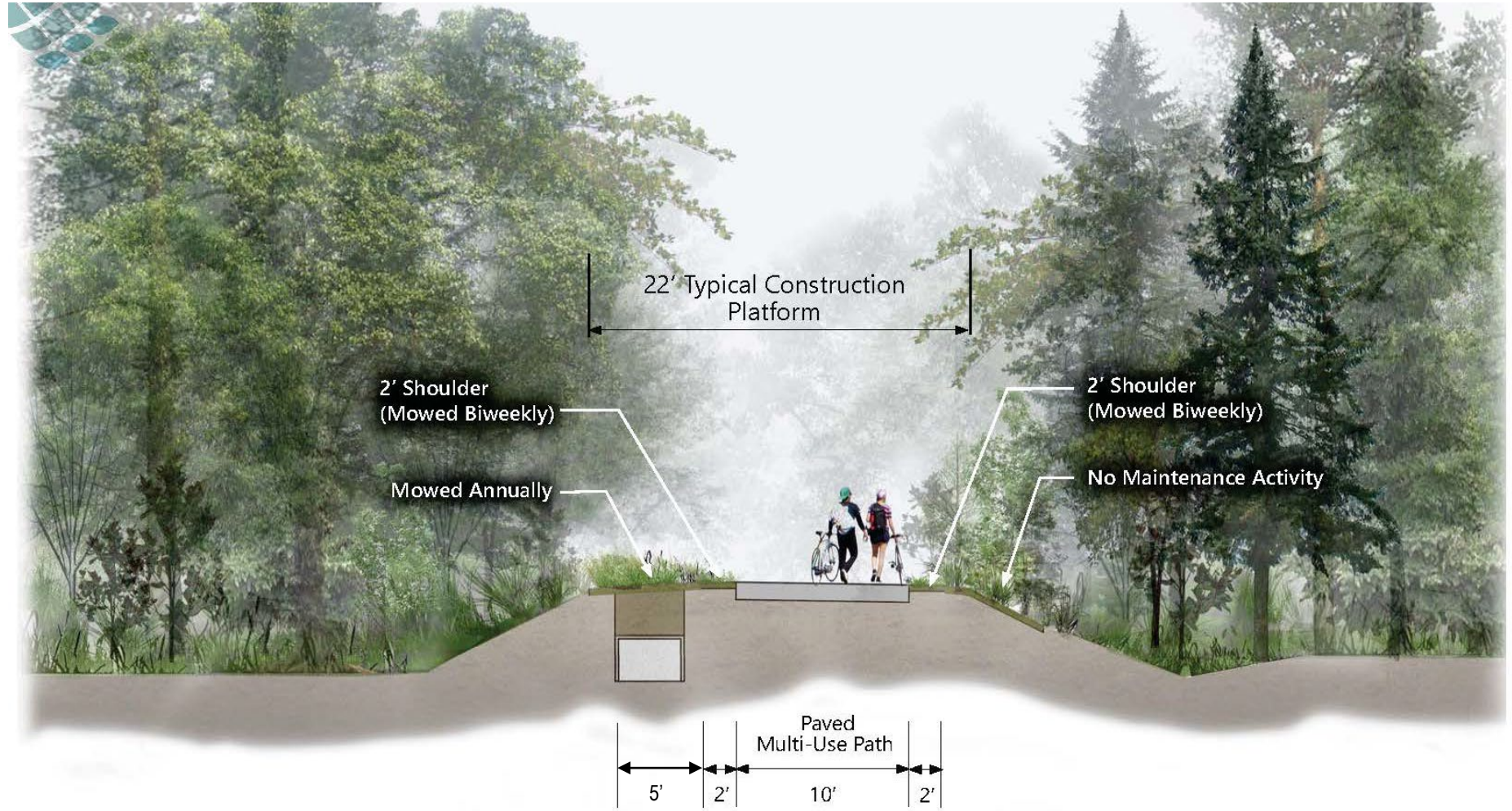
- Finalize Stormwater Pollution Prevention Plan (SWPPP)
- Site preparation (installation of all erosion controls and other proposed best management practice features)
- Grading of construction platform
- Transmission line installation
- Installation of stormwater management features
- Loaming, seeding, and supplemental woody plantings



- Maintain erosion and sediment controls
- Final grading and compacting gravel base
- Paving MCRT and turnouts
- Installation of additional woody vegetation plantings
- Loaming and seeding shoulders
- Removal of erosion and sediment controls upon site stabilization

- Erosion and Sediment Controls
 - Timber mats for cranes and turbidity controls at Hop Brook
 - Syncopated silt fence within Estimated/Priority Habitat areas and within 450 feet of a vernal pool
 - Silt fence/compost filter tube combination in all other areas
 - Jute mesh erosion control blankets
 - Use BMPs to control sedimentation during dewatering
 - Use BMPs for temporary stockpiling
- Spill Prevention Control and Countermeasure Plan
- Stormwater Pollution Prevention Plan
- Full time environmental monitors during construction

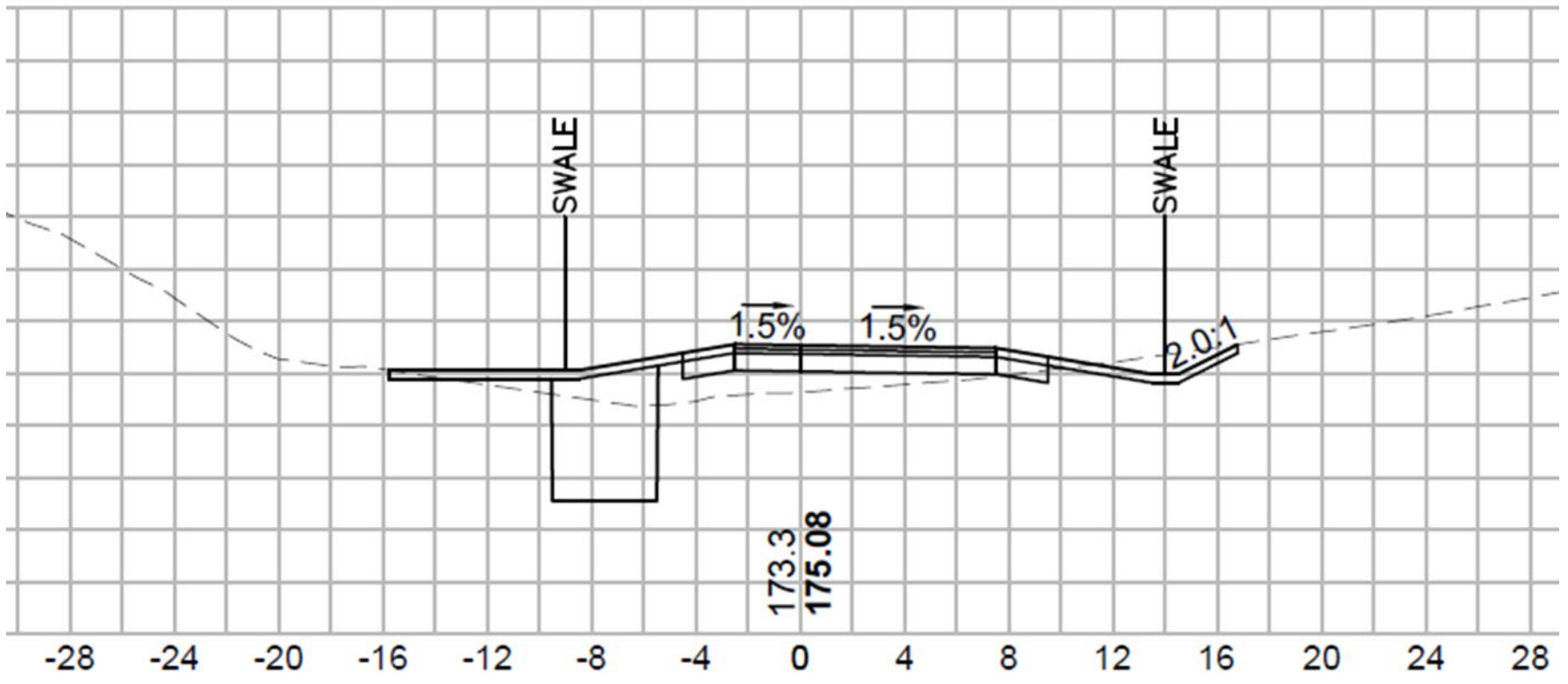
Operations and Maintenance Vegetation Management(DCR)



- **Yearly inspection, and maintenance (as necessary), of stormwater management system by DCR as described in the Operations and Maintenance Plan (Appendix F)**

Typical Cross Section

394+50



Stormwater Management Standards and Stormwater Bylaw



- Construction phase stormwater management meets applicable EPA standards
- Stormwater management system designed for the bike path
 - Per 310 CMR 10.05(6)(m)6, the Stormwater Management Standards at 10.05(6)(k) shall apply to the maximum extent practicable to “footpaths, bike paths, and other paths for pedestrian and/or nonmotorized vehicle access”
- Project meets the requirements of the Sudbury Stormwater Bylaw Regulations
 - Meets the definition of “redevelopment” = “construction, alteration, or improvement on a previously developed site”
 - Environmentally sensitive site design and low impact development practices incorporated to maximum extent practicable
 - BMPs incorporated into Project design
 - Existing and proposed conditions were analyzed for the one-inch storm event and 2-, 10-, 25-, and 100-year events as required by the Bylaw

- Stormwater System Design:
 - Maintains existing hydrologic conditions to the maximum extent practicable
 - Sheet flow off the bike path surface
 - Country drainage (generally distributed discharge)
 - Vegetated swales with check dams
 - Catch basin (Peakham Road)
 - No winter maintenance or deicing materials used

Massachusetts Stormwater Management Standards



Standard 1: No New Untreated Discharges

No untreated discharges; no outfalls

Standard 2: Peak Rate Attenuation

Minimal rate increase. Uncollected runoff able to infiltrate over a large surface area

Standard 3: Recharge (to the maximum extent practicable)

Recharge to shoulders of path and slopes of embankment

Standard 4: Water Quality

No contaminant source from bike path and well vegetated shoulders for filtering.

Standard 5 Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

Bike path not a LUHPPL

Standard 6 Critical Areas

Much of Project length in Zone II, however, the bike path is not a contaminant source

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

Project qualifies as "Other Project" and meets stormwater standards to the maximum extent practicable

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

Extensive erosion controls included on Project Plans; SWPPP will be prepared

Standard 9: Operation and Maintenance Plan

Operations and Maintenance Plan has been prepared

Standard 10 Illicit Discharges

No collection system; no opportunity for illicit discharges

Sudbury Stormwater Bylaw Regulations



3A: Environmentally Sensitive Site Design

- Project preserves the existing natural hydrologic conditions with respect to the ground and surface water to the maximum extent feasible.
- Design limits the amount of vegetation clearing and earthwork through the corridor
- Project uses vegetated shoulders and conveyance swales with check dams to promote infiltration and recharge to maintain the existing drainage patterns.

3B: Low Impact Development

- Conveyance swales, areas of increased infiltration, impervious area disconnection, and low impact sustainable landscaping such as combined herbaceous/woody seed mix along the bike path incorporated
- Design provides treatment while preserving existing landscape as much as possible.

3C: Limiting Contaminants and Pollution – Best Management Practices

- Project will be used by pedestrians and bicyclists, which will not contribute contaminants
- Vehicular access along the path will be limited to bi-weekly mowing over the shoulder by DCR, annual mowing of the duct bank, inspections by Eversource approximately once every three years, and other periodic maintenance as needed
- Path will not be plowed and/or treated in the winter

3D: Water Quality Volume

- Water quality volume for sizing of BMPs was based on 1-inch of runoff from the net new impervious area

3E: Methodology

- Hydrologic analysis for the existing and proposed conditions was determined using HydroCAD modeling software which is based on the NRCS Technical Release 20 and 55 (TR-20 and TR-55) methodology

Sudbury Stormwater Bylaw Regulations



3F: Design Storms (1-inch and 2-, 10, 25-, and 100-year storm events)

- Rainfall-runoff response under existing and proposed conditions was analyzed for storm events with recurrence intervals of 2, 10, 25, and 100 years, with rainfall amounts of 3.2", 4.8", 6.0", and 8.6", respectively,
- Rainfall depth of one inch was also evaluated

3G: Pre and Post Subwatershed

- Analyzed the pre- and post-development conditions at designated design control points

3H: Land Area for Existing and Proposed Conditions

- Analyzed using the same land area for the existing and proposed conditions

3I: Total Volume of Discharge and Peak Rates

- Total volume of discharge and peak rates were calculated and are documented in discussion of MassDEP Standard 2

3J: Redevelopment Standards

- Complies with redevelopment checklist; see discussion of compliance with MassDEP Standard 7

4: Water Reuse/Water Conservation

- No applicable

5: Landscape Design

- Project will restore all disturbed areas outside the 10-foot-wide MCRT using a native seed mix with a focus on developing herbaceous and low-growing woody vegetation over the two-foot shoulders and the duct bank (a 5-foot area). In addition, any areas outside of the 19-foot-wide maintained corridor (which includes the 10-foot paved MCRT, two 2-foot shoulders, and 5-foot area over the duct bank) will be allowed to naturally revegetate with herbaceous and taller woody vegetation.



Thank you. Questions?